

WHAT IS CLAIMED IS:

1. A transcoder system for adaptively reducing frame rate capable of changing audio-visual stream of a GOP (group of pictures), each picture consisting of a plurality of macroblocks, the transcoder system comprising:
 - 5 a switching device, which inputs the audio-visual stream and permits passing a part of pictures in accordance with a first algorithm;
 - a variable length decoder connected to the switching device, which retrieves motion vector for each macroblock in the pictures;
 - 10 a motion vector compensation device, which computes output motion vectors respectively for the macroblocks in accordance with an input picture type;
 - a memory connected to the motion vector compensation device, which stores the output motion vectors computed by the motion vector compensation device; and
- 15 an encoder/decoder (codec) connected to the switching device, which decodes the pictures passing through the switching device using motion vector technique and then re-codes the pictures decoded in accordance with the output motion vectors computed by the motion vector compensation device.
- 20 2. The transcoder system as claimed in claim 1, wherein the codec comprises a first inverse quantizer and a second inverse quantizer, which have separate step sizes.
3. The transcoder system as claimed in claim 1, wherein the input picture type is a first type to indicate that a preceding I- or P-picture and a

current P-picture pass through the switching device.

4. The transcoder system as claimed in claim 1, wherein the input picture type is a second type to indicate that a preceding I- or P-picture and a current B-picture pass through the switching device.

5 5. The transcoder system as claimed in claim 1, wherein the input picture type is a third type to indicate that a preceding B-picture and a current B-picture pass through the switching device.

10 6. The transcoder system as claimed in claim 1, wherein the input picture type is a fourth type to indicate that a preceding B-picture and a current P-picture pass through the switching device.

7. The transcoder system as claimed in claim 1, wherein the first algorithm performs that the switching device selects one every N pictures in the audio-visual stream for passing, so as to reduce frame rate, where N is a positive integer.